CHAPTER 11

Imagination: Creating Alternatives in Everyday Life

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Imagination and creativity are closely related. Creativity has recently received increased research attention (Glăveanu 2014; Glăveanu et al. 2015; Kaufman and Baer 2006; Kaufman and Beghetto 2009; Kozbelt and Durmysheva 2007; Moran and John-Steiner 2003; Sawyer et al. 2003; Sternberg 1999), while imagination has received less attention. Arguably this difference is because creativity focuses more on visible, and potentially profitable, outcomes, whereas imagination is often associated with being private, immature, and gratuitous (Piaget 1992). However, we take here the opposite stance. Following Vygotsky, we will be starting with the proposition that imagination is the psychological process at the heart of creativity, and that it is, as such, at the heart of culture:

> It is precisely human creative activity that makes the human being a creature oriented toward the future, creating the future and thus altering his own present. This creative activity, based on the ability of our brain to combine elements, is called imagination or fantasy in psychology. […] But in actuality, imagination, as the basis of all creative activity, is an important component of absolutely all aspects of cultural life, enabling artistic, scientific, and technical creation alike. (Vygotsky 1967/2004, pp. 9–10)

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In this chapter, we will argue that a sociocultural account of imagination can enrich the literature on creativity. Specifically, we introduce a sociocultural model for conceptualizing imagination proposed by Zittoun and Gillespie (2016). This model distinguishes the triggers, sequence, and outcomes of imagination. We will then use this model to show how imagination is central to the creativity of everyday life, and, moreover, how it can inform interventions in creativity.

The Psychological and Cultural Antecedents of Creativity

Although creativity has recently been conceptualized as a process (Glăveanu 2012; Sawyer et al. 2003), it is still predominantly defined in terms of outputs, such as ideas, artifacts, or products which are deemed to be original, surprising, and potentially valuable (Boden 1996). While there is some debate about how original something needs to be (i.e., something original within the daily life of an individual or something original within the life of the community; Glăveanu and Gillespie 2014) and whether being valuable is necessary, there is a widespread assumption that creativity needs an output that can be evaluated. This process of evaluation is not necessarily an individual process, because creativity always pertains to an output, and this output can be judged by an audience. Indeed, it has been argued that the judgment of the audience is central to the determination of creativity (Dewey 1934; Csikszentmihalyi 1999). The role of the audience in creativity makes it an inherently cultural and normative phenomenon.

Creativity has been widely researched, as it is a key topic in the fields of education, management, technology, and arts (Beghetto and Kaufman 2010; Craft 2000; Davies et al. 2013; Sternberg 1999). Increasingly, in the knowledge economy, there is an emphasis on increasing innovation, and in this political agenda, creativity is a key component. But, again, this brings us back to the outputs of creativity; the focus is on objects, products, patents, and so on; measurable outcomes begin to determine what creativity is. This focus on the outputs, we suggest, has led to some oversight regarding the psychological antecedents or conditions, specifically, the role of imagination. Imagination is often opposed to outputs; it is seen to be unproductive, fanciful, and potentially distracting. We will argue that it is precisely imagination's lack of constraints in terms of both outputs and reality itself then makes it an important ingredient in the process of creativity.

Unlike creativity, the value of imagination resides in its very existence, independent of any output, community judgment, or validation. Although imagination often has consequences, both emotional and practical, it is not defined by its consequences. Imagination is an experience that can remain completely private (Singer and Singer 1992), but it can also be shared. Accordingly, we would argue that imagination is usually part of the process of producing something that is judged creative. Indeed, imagination is likely a necessary condi-

tion for creativity, but it is not the case that all imagination leads to creative outcomes.

Not only are imagination and creativity two different moments in a chain of events; the concepts also have different statuses. The concept of imagination designates a specific psychological process, different from other processes because of inherent properties. In contrast, the concept of creativity is a social qualification to evaluate positively certain range of conduct or their outputs. The same event can be judged creative or not depending on the values and criteria of a given community (Glăveanu and Gillespie 2014), whereas an occurrence of imagination is independent of any such judgment.

Finally, in addition to arguing for imagination as psychological phenomena and as a necessary precondition for creativity, we also want to argue for a thoroughly cultural conception of imagination, and thus, creativity. In this sense, we align with existing work that emphasizes the cultural dimension of creativity (Glăveanu 2010; Sawyer 2011). To focus on imagination is to focus on the contents of thought, on the stream of experience. When we look into this stream, we find elements that are cultural in many ways. First, much of the content of imagination pertains to imagery and ideas widely circulating in a culture. Second, the very motivations and wishes being vicariously satisfied by imagination are also often refracted through culture. Finally, even imagination that is based on the individuals' own practical experience of the world tends to be cultural because the world that was experienced is a world that has been shaped by other people, in different times and places.

A Sociocultural Approach

We adopt a perspective in which culture is not so much a question of research, as a starting and end point of our enquiry. Sociocultural psychology is developing as a new general psychology (Valsiner 2014), drawing on authors of the past that considered humans' complex inclusive separation to their social and cultural worlds (e.g., Lewin 2000; Mead 1934; Vygotsky 1986). Such psychology starts with the assumption of the uniqueness of each human person, together with its necessary location in a web of interactions with others beings, in socially and materially bounded situations. Its two specificities, compared to other interactive approaches, are its emphasis on temporal dynamics, that is, development, and on sense making, for which it pays a special attention to semiotic processes. Such emphasis enables us to analyze how socially constructed meanings or discourses eventually become psychological, and thus guiding human action, and how, conversely, a person's unique understanding or thought about the world can lead to specific activities in the world—through signs, things that designate something for a mind under some specific regard (Peirce 1974).

Drawing on Schuetz (1945, p. 552), we call "paramount reality" the taken-for-granted world in which people live. It includes the others with whom we interact, material things, physical time, and social and symbolic realities which

we assume to be out there. Thus, paramount reality includes the mountains at the horizon, the educational system, the chair on which one is sitting, and widespread ideas about too much sitting being a health hazard. People in their interaction with paramount reality constitute "spheres of experience". A sphere of experience designates "a configuration of experiences, activities, representations and feelings, recurrently occurring in a given type of social (material and symbolic) setting—it is one of the various regular, stabilized patterns of experience in which a person is likely to engage on a regular basis" (Zittoun and Gillespie 2016, p. 8). A sphere of experience combines the perspective of a specific person, engaged in a specific situation with its "cultural pattern of group life" (Schuetz 1944, p. 499).

If we want to account for experienced lives, we have to distinguish two types of spheres of experience: proximal and distal (Zittoun and Gillespie 2015). "Proximal experiences" are directly located in the paramount reality. People are engaged in irreducible time, actions have causal consequences. Cooking an egg, or meeting people at a café belong to proximal experiences. In contrast, "distal experiences" are lived as if partly, if not fully, disconnected from the present constraints; people can imagine situations independently of their bodily location, beyond the laws of time and space, and also, independently of logic and causality. Dreaming, daydreaming, or being engrossed in a novel are distal experiences. Finally, on a daily basis, people constantly alternate between spheres of experiences; places where they sleep and wake up, the sphere of work, specific friendships, and so on, each demanding the mastery of certain activities, relational modes, emotional experiences, and specific values and projects. Schuetz (1945, p. 553) has called mild "shock experience" that of moving between spheres, such as falling asleep and entering in a dream, or finding one's way back to reality after seeing a movie. We believe that imagination is a powerful means for traveling, at a psychological level, in and through spheres of experiences.

Imagination as Uncoupling

Imagination has been studied as a process of seeing things in their absence in one's mind eyes, in a more or less accurate fashion (Descartes 1641); it also has been seen as the process by which human can give meaning to the impressive world in which they live and the emotions they feel (Vico 1993). Arguably, it is a form of "stimulus independent thought" (Killingsworth and Gilbert 2010, p. 932), in the sense that the flow of experience is not directly guided by the proximal situation (although it might be facilitated by a symbolic resource, such as a book or film). It is often seen as an emotional, slightly irrational capacity, which soon gets tamed by reason (Piaget 1945), or possibly, that plays a role in regret (Byrne 2005) and ruminations. Only more recently authors have started to see its functions in its capacity of "bracketing" reality (Bogdan 2013), which eventually also allows exploring alternative realities (Singer and Singer 1992, 2005), finding some freedom from social constraints

(Cohen and Taylor 1992) or is pleasurable in itself (Oppenheim 2012). Hence, seen as creative or reproductive (James 1890; Ribot 2007), representational or embodied, negative or positive, imagination has had all possible status in the literature. Drawing on Freud, and then Vygotsky and Winnicott, we consider imagination as a dynamic which is creative, multimodal, and able to substantially expand experience (Pelaprat and Cole 2011; Zittoun and Cerchia 2013).

We conceptualize imagination as a looping experience. Imagination is "disengaging from the here-and-now of a proximal experience, which is submitted to causality and temporal linearity, to explore, or engage with alternative, distal experiences, which are not submitted to linear or causal temporality. An imagination event thus begins with a decoupling of experience and usually concludes with a re-coupling" (Zittoun and Gillespie 2016, p. 40). Defined in these terms, imagination includes dreaming, daydreaming or mind wandering, remembering, anticipating, exploring alternatives, or enjoying fiction or any other cultural experiences. Imagination is thus an embodied experience, often emotionally engaging, and potentially transformative for self and others.

The Sequence of Imagination

Given our sociocultural approach, our aim is to study imagination as a concrete stream of experience, as something that unfolds in time, within a specific context, but also drawing upon the past and giving shape to the possible future. We have thus proposed to conceptualize imagination as a "loop", that is, as a temporal sequence with triggers, resources, and outcomes. Before describing these three moments, and the psychological processes by which the resources are utilized to create alternatives, let us first give an example of imagination.

In the most standard case, imagination demands our consciousness to leave the proximal sphere of experience, to expand into a distal experience. For example, a person engaged in a task at work, gets bored, looks up out of the window, and starts to imagine how to refurbish his summerhouse. Here, the proximal sphere of experience is the task-at-the workplace, the trigger for disengagement is boredom, and the distal experience is the sphere of the distant house. Imagining refurbishing a summerhouse requires the person to mobilize images of his summerhouse, his experience of painting and building, his experience of houses seen, decoration catalogues browsed, memories of childhood informed by the family photo album, and so on; such a reverie might also entail constraints, such as the reality of the budget available, or the possibility of the neighbors' disapproval. The loops ends, or experience recouples, when the daydream ends, and the present task comes back to the fore. Maybe the reverie runs its course or maybe the person's boss appears. The outcome of the imagination might be simple relief (of having temporally escaped a boring situation) or pleasure (of enjoying the vicarious experience of refurbishment in the warm summer sun); in this case, it might also be a starting point for a series of activities, such as convincing his partner about a paint color, buying paint, or planning the work, which in turn might lead the summerhouse to become more valuable, to be sold

for a higher price, or starting a new a decoration trend, and so on and so forth. In other words, the outcomes feedforward into the life trajectory, potentially causing changes for self, others, and the material and sociocultural world.

Triggers

Triggers are defined as that which provokes the disengagement from the proximal sphere of experience. Besides boredom, ruptures—the end of the taken for granted—can also trigger imagination: being in a new environment, or in the dark; having a new neighbor; or becoming a parent. Third, a too high intensity or invasive quality of a sphere of experience can trigger imagination: a too strong pain, a too difficult task, or imprisonment, may all demand mind to wander off. Fourth, culturally designed techniques for uncoupling experience can be used: going to the cinema theater, taking recreational drugs, or engaging in ritual or meditation, aim precisely at uncoupling from the proximal experience and engaging into a distal one.

Resources

The loop of imagining itself builds upon various resources. What "nourishes" the loop are all the past experiences, images, embodied memories, present perceptions, that will enter in the bricolage of imagining. The most typical resources for imagining are traces or past experiences, or personal memories—to continue the summerhouse example, one's memories of houses and places. Second, uses of symbolic resources play an important role: using images seen is books, magazines, films, or any other cultural artifact (Zittoun 2006). Third, social representations can be used as resources for imagining (Marková 2003; Moscovici 2000): the shared ideas, norms, and values for instances associated to houses and tastes, likely guide people's actions. Fourth, interpersonal relations also offer resources to give shape to imagining.

These four types of elements used as resources both nourish and constrain. These elements make imagination possible, they help imagination to deploy, but also, they circumscribe the limit of imagination within a given cultural milieu. For instance, they forbid some types of colors or designs that would be considered bad taste, or they more radically prevent all range of possibilities. A given state of the paramount reality hence entails an "imaginative horizon" (Crapanzano 2004)—a zone beyond which people do not imagine, mostly by lack of means. For example, before photovoltaic cells were invented, one would not imagine installing solar panels on one's summerhouse.

Semiotic Work

Imagination is a semiotic process by which various materials collected through present, past, and vicarious experiences is mobilized and used as resources, to give shape to an emotional, embodied experience. In addition, imagination can AU5

be elaborated with diverse material, including complex semiotic systems mastered by a person (musical codes, rules of construction, etc.). This is why the imagination of a trained architect is different of that of a child building shelters; both draw on what knowledge and experience they have, and the semiotic systems they master, in imagining a possible house.

This semiotic process demands the creations of new forms, which can be described along two lines. First, semiotic construction functions laterally: ideas, images, meanings get assembled and transformed. Here, we can assume that the main processes involved correspond to these identifies by Freud in his analysis of the dream work (Freud 2001a, b). These include the processes of condensation, by which diverse meanings and experiences become designated by a semiotic construct which thus becomes heterogeneous; displacement, by which some meaning is displaced from one construct to another one; figuration, by which some ideas or concepts of feelings can find a concrete form; and synthesis, which gives a new unity or consistency to diverse experiences within an imaginary experience.

Second, semiotic constructs in imagination can be seen as deployed along a vertical axis of generalization. Processes of generalization are involved in imagination, both process of categorization corresponding to socially accepted classes (as when Irish shepherds, fox terrier and basset hounds become subsumed in the category of "dog") and processes based on more experiential or emotional generalization (such as, all situations in which one feels uncomfortable) (see also the two processes of schematization and pleromatization in Valsiner 2014).

Imagination thus is a process of semiotic construction, bringing in diverse experiences to create new ones, which are emotionally laden and multimodal, and, because of this emotional and experiential involvement, may transform the experience of the person.

Three Dimensions

Imagination as temporary disengagement from proximal experiences can be described as a loop, which varies in a three-dimensional field, and along three dimensions. A first dimension is time, or the temporal orientation of imagining. The act of imagining occurs as the person lives in an irreversible, physical time, defining the paramount reality and mostly the proximal experience. However, imagination precisely disconnects from the proximal experiences located in the ongoing present. It allows to explore distal experiences in the past (former proximal experiences), or to explore experiences in the future, or in a time that could have existed or could exit in a twin planet. It allows traveling forth and back, imagining how Neanderthal would live in a space rocket allowing traveling in other galaxies, or how one's life could develop if one had studied, or not moved country. Hence, imagination is a loop that allows a disjunction from the physical time, and as such, it escapes the rules of temporality. Only, it imposes that, when a loop is ending, it comes back to the present of the person, that

is, the present at time $t + n$, the time of imagining. Hence, one can be absent to one's mathematics class, or to one's driving, for the time of imagining. In that sense, imagination includes remembering, anticipating, and counterfactual reasoning.

The second dimension of imagining is its distance from the concrete here and now into more general experiences, along the processes of generalization mentioned above. Because imagination operates on semiotic material, that semiotic stuff can be more or less indicial or indexical, or more or less symbolic and distanced from actual occurrences. Hence, imagining whether it would be nicer to cut one's apple horizontally or vertically demands a clear reference to an actual apple. However, imagining making the world a better place, or imagining a chiliagon, to use Descartes' example, are very general statements, that do not translate immediately into actual actions or experiences, but that can only mediate further meaning and actions. Imagination can demand more or less distanced semiotic experience, that is, use semiotic means that refer to further semiotic means. In that sense, exploring plans for action, or dreaming about a better world, are variations of imagination on the generalization dimension.

The third dimension of loops of imagining defines their distance from the paramount reality, or their plausibility. In a given social environment, with a certain shared knowledge and certain norms, and for a given person with skills and experience, some imagining clearly depart from what is or could ever be possible, while other are quite likely, or could or could have been the case. Hence, imagining that a blue hippo would pick one up after lunch to bring one to Saturn is quite implausible; imagining how one's garden could flourish might be more plausible. Plausibility thus depends on various material, social, and symbolic constraints and enabling conditions. In that sense, having precursor ideas, being creative, or being considered as mad or heretic, depend on the implausibility of one's imagination in a given time and space ~~(Fig. 11.1)~~. AU6

Outcomes of Imagination

If imagination is a disjunction triggered by various events, its loop ends when a person's experience rejoins the present proximal situation and its course in the physical time. One of the great interests of imagination is that such jointure actually usually has outcomes—it slightly changes the person's experience in the proximal world (unlike the sort or rumination that Winnicott (2001) calls fantasizing, and that does not change the person).

Outcomes of imagination can have various scales and orientation. Imagination can mainly change a person's mood (feel less tensed after imagining that one could be sitting on a beach rather than in the tube) or her understanding of a problem; it is thus oriented toward self. Imagination can also bring to change one's relationship to someone else—to offer a present, to pursue a dialogue—or it can bring to actions in the world—plant a tree, change one's movement

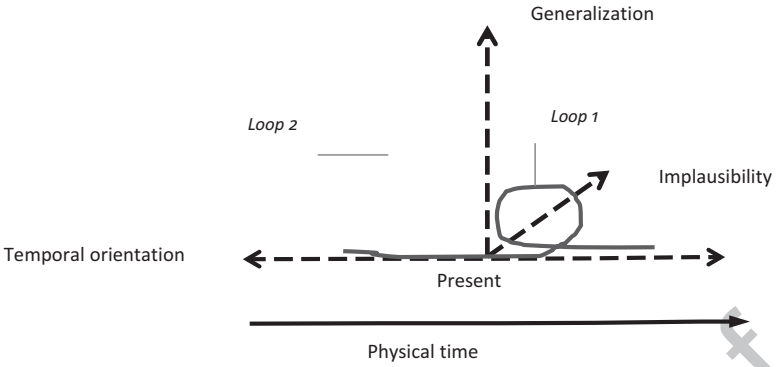

Fig. 11.1 Loops of imagination in a three-dimensional space

during an aikido lecture. It can finally be oriented toward a more general social entity, as when imagines how to limit the warming of the planet.

One could also say that some of the outcomes of imagining are microgenetic: they affect how a situation keeps unfolding leading to everyday creativity with a "mini-c" (Kaufman and Beghetto 2007). Some outcomes are imagination can play a role in the definition of possible selves, and progressively, in the creation of one's life path. Finally, imagination can have sociogenetic outcomes, for instance, when the imagination of some people, such as that of flying to the moon, becomes translated by semiotic artifacts, which are likely to become resources for other people's imagination, until the imagination becomes a social project, then turned by some, with financial and technical resources, into an actual trip to the moon—which marks a turning point in the history of society. In that sense, working through and emotional change, creativity, or social innovation can be seen as a continuation of imagination.

Using Imagination to Understand Creativity

Imagination and creativity intersect at the outcomes of imagination. While not all outcomes of imagination are necessarily creative (i.e., respite from boredom or taking a predictable course of action), all genuine creative acts, we would argue, necessarily begin with the human imagination. Accordingly, we are going to focus on sequences of imagination that lead to creative outcomes, specifically outcomes that alter the life trajectories of an individual or the history of a community.

As we have seen, imagination occurs at the level of individual experience, and refers to the stream of uncoupled experience within which the world as it is can be reconfigured into what it might become. Accordingly, the antecedents of creativity are to be found in the uncoupling of experience, and the stepwise movement of imagination, carving a line between the dimensions of time, generalization, and plausibility. We are going to illustrate this link between imagination and creativity by considering creative outputs at both the level of the individual and the community.

First, imagination occurs all along the lifecourse, but only some of its occurrences actually lead to specific actions which can change or reorient it, and thus be seen or evaluated by others. We have called these instances of imagination about one's life, which many enrich and transform its course, "life-creativity" (Zittoun and de Saint-Laurent 2015). Life-creativity can thus be defined as a way to create a life-path, that is, "refusing to be stumped by circumstances but being imaginative in order to find a way around a problem" (Craft 2000, pp. 3–4, quoted in Banaji et al. 2010, p. 29).

Second, imagination can lead to new practices and products, collectively acknowledged as such, and then reverberated in the social group and beyond. Creativity thus becomes innovation, feeding forward into cultural change. As an individual act of creativity is acknowledged and valued by the community, it becomes part of the resources that nourish future imaginings. This circular dynamic can, as we will show, guide trans-individual traditions of imagination, with potentially huge creative societal consequences. We will now closely examine imagination leading to creativity as these two levels, namely, at the individual and community levels.

Imagination as Life-Creativity

Imagination occurs in different locations of the lifecourse. It can be the main activity of a given sphere of experience, as when one is engaged in a proximal experience of storytelling with a child, or one is at the theater. Imagination might also be what connects or relates a proximal experience to a distal experience, for example, thinking back about a past experience or imagining the future. Or imagination might occur precisely when one proximal experience threatens to end, and thus the person has to envisage possible futures or alternatives. Because people's imaginings have specific idiosyncratic qualities, and use as resources memories of past imagination, these can layer up, and slowly give a specific direction to a lifecourse.

An example of the role of imagination in the lifecourse can be found in the Czech documentary *Studies of marriage* (Třeštíkova 2009) that follows six couples along 25 years of their married lives starting in 1980 in Communist Czechoslovakia to end up in early 2000s in liberal Czech Republic (for a full analysis see Zittoun ~~In press;~~ Zittoun and Gillespie 2016, Chap. 6). In one of the couples, Stanislav appears as a young man who deploys a lot of imagination in his leisure time, next to his work as technician and his life with his young wife and children. With an interest for small transistors and low-voltage installations, he progressively gets interested in more complex electronics and computing. For instance, he builds a small telescope; now able to see the sky from closer, he then becomes curious about what is behind. He progressively builds a large telescope, directed by his computer, and is able to see quite far away, which leads his imagination to the limits of our galaxy, as he imagines what is beyond the visible galaxy and the origins of the universe. In Stanislav's case, imagination is largely limited to a leisure time activity, and the distal imag-

ination becomes more and more mediated, by tools and knowledge, until he ends up, according to his own account, with one of the best telescopes in the Czech Republic.

On the other hand, young Stanislav transposes his interest for what is beyond the visible and the reachable in another sphere of experience. He builds, during the communist years, a satellite dish that allows him to view German TV channels. Curious of what these people said and eager to imagine their lives, he teaches himself German. Eventually, some years later, after the end of communism and the opening of a liberal market, Stanislav has to define a new occupation, as people lost their state-given jobs. As with many young adults, he then had to imagine possible life-paths for himself; to imagine himself as another, he first draws on his past leisure time occupation to imagine possibilities. He thus first tries to create a technological company, which however fails—here, imagination leads to one option which is not socially validated. Maybe the idea for a technological company was not particularly creative or original, but, nonetheless his believing in the vision and altering his life course according entailed imagination.

Later, Stanislav becomes a translator from German to Czech for a large company (Zittoun and Gillespie 2016). In that case, imagination leads to actions which are now socially accepted and validated. In other words, an outcome of his imagination—life beyond the borders—is his learning of German; and mastering German opens a new life-path, which can then be followed, when the paramount reality and the social environment acknowledged and validates that skill. In that sense, Stanislav interests for technical artifacts, and his imagination of what is beyond the given, become key constituents of his life-creativity.

Imagination as Cultural Creativity

The history of our human society is filled with instances of collective imagination which fed forward into more or less creative outcomes. Indeed, the history of utopian projects is based upon a history of the human imagination (for a discussion see Zittoun and Gillespie 2016, Chap. 7). However, the example that we want to analyze briefly is the 1969 moon landing. For most of human history, the moon was not seen to be a place, certainly not a place that humans could reasonably visit. It was only after the widespread use of telescopes in the seventeenth century that it became apparent that the moon was not spherical, but instead was a landscape. The patterns observed on the surface of the moon where generalized, from earthly experience, to become mountains, valleys, and even rivers. The craters, produced by meteor impact, were thought to be, again on the basis of earthly experience, volcanos. Initial imaginations of actually traveling to this alien landscape were highly implausible. Dreams (Kepler 1608) and swans (Godwin 1638) were the initial means of transport. However, as the industrial and scientific revolutions unfolded, more plausible means were proposed (McCurdy 2011). Jules Verne (1865), *for example, calculated the details for a cannon that could shoot a projectile carrying humans* to the moon.

Needless the initial acceleration proved problematic. This method was taken up and used by Miles (1902) in *Le Voyage dans la Lune*. This film, which is arguably the first science fiction film, was hugely popular in both Europe and the USA—filling the minds of viewers with vivid images of traveling to the moon, seeing earth-rise from the moon, and encountering life on the moon. These vivid images, arguably, provided some of the motivation and focus that would culminate in the moon landing

The imagination of traveling to the moon was further nourished by the rocketry used in World War II. The German V2 rockets, which terrorized London, received a lot of publicity. Self-steering rockets traveling at high speed provided the resources for imagining a new way to travel to the moon, namely using rockets. The world's first satellite to orbit earth, in 1957, again made space travel seem achievable. So vivid did this imagination become that, in 1961, when President Kennedy announced the plan to send people to the moon, it was seen as ambitious, but not implausible.

The actual work of landing people on the moon entailed numerous creative ~~outputs~~. Solutions had to be found for how to steer the rocket, how to land it, how to live in minimal gravity, how to maintain communication, and so on. The interesting fact is that each creative solution to a problem was feeding forward into making the overall imagination of landing on the moon more vivid and plausible. Moreover, had the landing failed, then history might have judged these innovations as less valuable, and less creative. But, the success of the moon landing, celebrated across the globe, provided the audience legitimation to say, categorically, that this was a major creative achievement.

At this cultural level, that is the level of a tradition of imagining landing on the moon which spans nearly 400 years, individual acts of imagination form the bedrock. Yet, no individual act of imagination is absolutely necessary. There seems to have been a cultural momentum, a preferred persistent tendency toward this imagination. And thus, individual sequences of imagination, individual loops of imagination, give way to larger looping sequences; namely, the ~~outputs~~ of one imagination feeding forward and becoming the resources for the next loop of imagination.

Imagination at the Core of Creativity

Following Vygotsky (2004, discussed above), we consider imagination to be the psychological process at the heart of creativity. According to our proposition, imagination designates a basic process (i.e., uncoupling, elaborating new semiotic constructs, and then recoupling to proximal experience) that can take many forms and variations. In some cases, imagination can be externalized, leading to actions or the creation of new cultural elements or even guiding ideas and ideals. Thus, the outcomes of imagination, at the level of the life course or the community, can actually have a guiding function, feeding into the life of the individual or the history of society. These ~~outputs~~ cross over into the domain of creativity if other people judge ~~the outputs~~ as creative (or if the

creator imagines an audience which gives appropriate recognition). We thus suggest that creativity designates the dynamic or the outcomes of imagination, at various scales, when these are acknowledged by social others.

The model we have proposed also allows us to conceptualize how imagination can be limited, specifically by a lack of resources, when generalization cannot be achieved, or when temporal horizons are too constrained. Also, if the outcomes of imagination are not socially acknowledged, then creativity—in the lifecourse, or as social phenomena—cannot take place.

One of the consequences of such analysis is that, in order to foster creativity, a group or a society should foster and support imagination (see also Zittoun and Gillespie 2016, Chap. 8). Supporting creativity does not only depend on developing lateral thinking techniques, brainstorming, or mind-mapping. Rather, as creativity is often the unexpected outcome of local or collective forms of imagination, then creativity can be enhanced by supporting the imagination. Specifically, imagination can be facilitated, our analysis suggests, if people have the time and place to disconnect from ongoing demands, have access to diverse resources to nourish their thoughts, and can freely play with alternatives, without being afraid of their consequences. In that sense, supporting and preserving the diversity of creations of the present and the past (i.e., books, arts, fictions, and sculptures) is a crucial part of supporting resources for imagining. Imagination needs resources, and, simply put, the more diverse and rich those resources, the more diverse and rich the human imagination. Also, creating spaces for thinking and imagining should be facilitated—but the means by which this can be done are diverse (i.e., limiting productivity demands, boredom, or major uncertainty). Tolerating individual idiosyncrasies and originalities in ways of doing and modes of expression, and therefore, people's work of imagination, might also in the long run allow individuals to contribute in a novel manner to their lives or to society as a whole.

Conceptualizing imagination and creativity together opens up new paths for both intervention and research, and, as such, provides the justification for linking these concepts together. In the present chapter, we have begun to sketch out how this link might work at the level of psychological process, and we have illustrated it with two examples, one from the individual level and the other from a community level. Imagination, in short, is the play of ideas that can occur before any movement of actualization. Although imagination is often opposed to that which is real, in so far as individual life courses and history is made by people, then, we would argue, imagination contains the seeds of what might become real tomorrow.

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AU1	Please provide the email address for the corresponding author.	tania.zittoun@unine.ch
AU2	Please check if author affiliations are okay.	ok
AU3	Please provide details of Glaveanu (2012), Piaget (1945), Kaufman and Beghetto (2007), Banaji et al. (2010) in the reference list.	edited
AU4	Boden (1986) has been changed to Boden (1996) as per the reference list. Please check if okay.	ok
AU5	The sentence "Imagination is a semiotic process by which various materials… " has been edited for better clarity. Kindly check whether the changes convey the intended meaning.	ok
AU6	Please check if the inserted citation for Fig. 11.1 is okay.	proposed move
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